

### AMENDMENTS TO THE CLAIMS

Applicant submits below a complete listing of the current claims, including marked-up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing. This listing of claims will replace all prior versions, and listings, of claims in the application:

#### Listing of the Claims

1. (Currently amended) A single-crystal layer of a first semiconductor material (~~5~~) comprising single-crystal nanostructures of a second semiconductor material (~~3~~), wherein the nanostructures single-crystal are distributed according to a regular centered tetragonal mesh crystal lattice.
2. (Currently amended) The layer of claim 1, wherein the first semiconductor material (~~5~~) is silicon and the second semiconductor material (~~3~~) is germanium.
3. (Currently amended) The layer of claim 2, wherein ~~the~~ a height (~~b~~) of the tetragonal mesh is equal to ~~the~~ a sum of two equal elementary values (~~e<sub>Si</sub>~~) selected from a range of from 60 to 80% of the nanostructure diameter (~~D~~) up to four times the diameter.
4. (Currently amended) The layer of claim 2, wherein ~~the~~ a planar base of the centered tetragonal mesh is substantially square and exhibits a side of a value (~~a~~) ranging between 50 and 300 nm.
5. (Original) A light source, comprising the layer of claim 1 associated with an electric excitation circuit.
6. (Original) The source of claim 5, forming a coherent source.
7. (Original) The source of claim 5, forming a diode.
8. (Original) A light-trapping device, comprising the layer of claim 1.

9. (Original) A photodetector, comprising the device of claim 8.
10. (Original) A diffractor of a light or acoustic wave, comprising the layer of claim 1.
11. (Original) An optical or acoustic filter, comprising the layer of claim 1.